RHODE ISLAND DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

FACT SHEET

WETLANDS #12 **Office of Water Resources / Fall 2001**

Common Application Mistakes and Deficiencies – Technical

Once an application passes the initial administrative review, it is assigned to a wetland biologist and an engineer for technical review. DEM finds that there are certain technical requirements that are common trouble spots for applicants. Mistakes and omissions result in needless delays in processing applications. Remember that the key to a speedy DEM review is a complete application the first time around. This fact sheet lists the most common technical mistakes and omissions and includes steps to help you avoid these common pitfalls.

1) The 'Limit of Disturbance' is not properly depicted

The 'limit of disturbance' is the line on the site plan that illustrates the limit of your proposed project. Included within the 'limit of disturbance' are all construction areas (proposed clearing and grading, temporary roads, stockpile areas, etc.) and all proposed permanent features including buildings, roads, driveways, wells, yards, etc. DEM often finds that the 'limit of disturbance' is incomplete on a site plan, it may be missing altogether, and sometimes it does not reflect the actual disturbance that will result from a project. It is important to graphically represent a realistic 'limit of disturbance.' The 'limit' should include a 10 to 30 foot work zone around ALL structures, not just the ones located within wetlands. This work zone is where equipment will travel to complete the construction and where materials will be stockpiled, etc. The 'limit of disturbance' line should connect with itself or connect with the property line at both ends with no open ends. This is the line past which no temporary or permanent disturbance or alteration will be permitted.

All projects must also include devices to control soil erosion and sedimentation. Commonly these controls (haybales, silt fences, etc.) are illustrated at the 'limit of disturbance.' In this way the erosion controls also serve as a temporary visual identifier of the limit of work. It is important for all erosion controls to be included within the 'limit of disturbance,' especially those that require that the soil be disturbed during installation. If the 'limit of disturbance' line is not accurately represented, wetland loss may result. See *Rules Appendix 5L3*.

2) The wetlands are incorrectly shown on the application plans

DEM often finds that wetland edges are correctly flagged at the project site, but not correctly illustrated on the site plans. There is a loss in accuracy from the field to the site plan. DEM needs accurate, not approximate, wetland edges. This may require extra cutting through dense brush by surveyors to reach wetland edge flags. It is especially important to depict stream edges accurately, so that the associated riverbank wetland is correct. Without an accurate picture of the wetland edges on the plan, it is impossible to approve the proposed project because wetlands may be negatively affected. Both survey-located and GPS located edges are acceptable, provided that the GPS, if used, is a differential system capable of sub-meter accuracy. Even with this there can be error due to the weather or a tree canopy. For this reason , DEM prefers survey-located edges to those located by GPS.
See *Rules Appendix 5K*.

3) There is a discrepancy between the fieldwork and the site plans, or the fieldwork is inadequate

Similarly, there is often a difference between the proposed work on the site plan and how the items are staked at the project site. The following items must be flagged or marked in the field in some way: 1) property boundaries, 2) limit of

clearing and disturbance, 3) wetland edges, 4) detention/retention basins, 5) subdivision lots, 6) corners of all structures and systems in or near wetlands (especially ISDS), 7) centers of roadways, pipelines, utilities, drainage swales or relocated water channels, and 8) reference points in dense vegetation. DEM finds most often that the *limit of disturbance*, *house corners* and *lot numbers* are not marked which makes a site visit very difficult and may result in a delayed decision on the application. DEM frequently finds that the limit of disturbance is both greater or smaller in the field versus on the application plans, proposed houses are generally larger in the field than on the plans, and proposed septic systems and wells are often shown in the wrong location. If any of these items are not correct, it is impossible for a DEM biologist or engineer to decipher how wetlands may or may not be affected.
See *Site work to be Performed by the Applicant* and *Rules Appendix 5*.

4) The project narrative is inadequate or does not match the site plans

The project narrative, which is required with both the *Request for Preliminary Determination* application and the *Application to Alter*, helps DEM biologists and engineers understand the thinking behind a project design. The narrative goes hand in hand with the *Impact Avoidance and Minimization* statement in describing the reasoning behind the proposed placement of buildings, roads, etc. The narrative is particularly important for the *Application to Alter* because the public may review an application during the notice period.

The narrative should describe exactly what an applicant proposes to build and it must match exactly what is shown on the site plans. DEM finds that where there are frequent and last minute changes to the plans, the changes are not necessarily made to the narrative. This may occur because different people complete the site plan and narrative. It is especially important to double check that the narrative and site plans match on complicated sites. If a description is generic and terse it fails to give DEM needed information about a site or project and thus delays a decision. The narrative is also required for the *Request for Permit Modification* application, which should describe all proposed modifications and the reason for the changes.
See *Rule 9.09C* and *Appendix 6B.*

5) The applicant fails to provide stormwater "Best Management Practices"

"Best Management Practices" or *BMPs* are practices that help to preserve freshwater wetlands functions and values. Often a proposed project includes changes to the ground cover, the topography, and the amount of open versus paved land such that stormwater runoff will change in quantity and quality. It is the applicant's responsibility to incorporate the appropriate *BMPs* into a project so that impacts to the nearby wetlands are avoided and minimized to the greatest extent possible. DEM recommends that the applicant use the Rhode Island's Stormwater Design and Installation Standards Manual and the Rhode Island Soil Erosion and Sediment Control Handbook for help in designing projects. In addition, the following project design hints should be helpful: 1) minimize the limit of disturbance and leave a natural buffer around wetlands, 2) maintain natural drainage patterns, 3) avoid direct discharges to wetlands, 4) use BMPs to spread and treat the discharge of stormwater before it reaches a wetland. 5) BMPs should be designed to remove 80% of the suspended solids from stormwater before it is discharged to wetlands or water bodies whenever practicable.
See *Rules 5.12* and *10.03E-G*.

6) The applicant fails to include proper or adequate "Avoidance and Minimization"

When planning a project you should thoughtfully consider all the ways you can avoid and minimize all impacts the project may have on nearby wetlands. The site plan and *Impact Avoidance and Minimization* statement together must show that you have done everything possible to avoid wetlands and that any necessary alteration is minimized to the greatest extent possible. The *Impact Avoidance and Minimization* statement should give a clear description of the location of each structure and the reason for its proposed placement (many applications do not explain the reason for the placement of structures). If DEM observes a proposed alteration that appears excessive, and is not explained in the impact statement, we may conclude it is unnecessary and thus a significant alteration.

Following are some questions about avoiding and minimizing impacts that an applicant may ask:

- ☐ What is the reasoning behind the house location, could it be set further away from a wetland?
- ☐ Could the house size be reduced to avoid altering wetlands?
- ☐ If there is a stream crossing, can a bridge or a culvert be built to both allow flow to continue without blockage and to facilitate wildlife/fish movement?

☐ Can the proposed road slopes be steeper to avoid filling wetland?

The goal of DEM Wetlands Permitting Program is to preserve the purity and integrity of all freshwater wetlands from random, unnecessary, and undesirable alterations. The only concrete way of knowing the reasoning behind an applicants choices and whether impacts could be reduced further is through the *Impact Avoidance and Minimization* statement. This statement is required for all *Request for Preliminary Determination* applications, *Applications to Alter,* and *Request for Permit Modification* applications
See *Rules 10.01, 10.03,11.02,* and *Appendix 3*.

7) The application site plans are illegible

DEM receives a number of illegible, confusing and mediocre site plans. If the plans are difficult or sometimes impossible to read they cannot be reviewed or approved. It is especially important to use a proper scale; DEM prefers 1" = 40' scale plans. Sometimes too much information is illustrated on a site plan, making it impossible to read. Other times plans have extra information that is added at the last minute in ink or pencil; this is not acceptable, as all marking must be permanently fixed. Site plans must be no smaller than 8 ½" X 11" in size and no larger than 24" X 36". See *Appendix 5* or the *Application Package* for all site plan requirements.

8) The application fails to show Floodplains

A Floodplain is the area of land adjacent to a river or stream or other body of flowing water that is inundated during a 100-year frequency storm. Floodplains must be indicated on site plans around rivers, streams, and intermittent streams; they are often forgotten. The maximum extent of the inundation is the limit of the floodplain, which must be indicated on a site plan. A rationale or analysis as to how it was determined must also be provided. Some 100-year flood areas are mapped by FEMA, however, if they are not, a Rhode Island licensed engineer must perform an analysis to locate the floodplain. DEM does regulate this area as wetland and it must be shown on the site plan, with all proper markings.
See *Rules 5.36, Appendix 4E*, and *Appendix 5K*.

9) Failure to Provide an Adequate Maintenance Plan

All Best Management Practices (BMPs) need to be regularly inspected and maintained to ensure their continued effective performance. For all BMPs the design engineer needs to develop a schedule for inspection and maintenance. Many times this schedule is not included on the application plans. The maintenance schedule should describe specific tasks that are needed to keep each type of BMP performing as designed. The schedule must be presented on the plans and contain specific information regarding the frequency of each inspection and maintenance task. The party (ies) who will be responsible for the performance of each task need to be identified. The designer should refer to Rhode Island's Stormwater Design and Installation Standards Manual and the Rhode Island Soil Erosion and Sediment Control Handbook for guidance in the preparation of a maintenance schedule.
See *Rules Appendix 5L*.

Disclaimer: This Fact Sheet is for general information purposes only and is not meant to be a substitute for the Freshwater Wetlands Act or the *Rules and Regulations Governing the Administration and Enforcement of the Freshwater Wetlands Act.*